ECONOMICS INFORMATION

Ontario

Fruit Crops
Estimated Production Costs
Ontario, 1984

Economics and Policy Coordination Branch
Ontario Ministry of Agriculture and Food
Legislative Buildings Toronto, Ontario
M7A 1B6

TABLE OF CONTENTS

	Page
Introduction	i
Methods and Procedures Used in Preparing the Crop Production Cost Estimates	ii

INDEX TO TABLES

Table No.

1. Apples on Standard Trees: Estimated Cost of Production, Ontario, 1984
2. Apples on Size-Controlling Trees: Estimated Cost of Production, Ontario, 1984
3. Sour Cherries for Processing, Hand-Harvested: Estimated Cost of Production, Ontario, 1984
4. Sour Cherries for Processing, Hand-Harvested: Operation Costs, Ontario, 1984
5. Sweet Cherries for Fresh Market: Estimated Cost of Production, Ontario, 1984
6. Sweet Cherries for Fresh Market: Operation Costs, Ontario, 1984
7. Sweet Cherries for Canning and Freezing Purposes: Estimated Cost of Production, Ontario, 1984
8. Sweet Cherries for Canning and Freezing Purposes: Operation Costs, Ontario, 1984
9. Sweet Cherries for Maraschino Purposes: Estimated Cost of Production, Ontario, 1984
10. Sweet Cherries for Maraschino Purposes: Operation Costs, Ontario, 1984
11. Concord Grapes for Processing: Estimated Cost of Production, Ontario, 1984
12. DeChaunac Grapes for Processing: Estimated Cost of Production, Ontario, 1984
13. Clingstone Peaches for Processing: Estimated Cost of Production, Ontario, 1984
14. Clingstone Peaches for Processing: Operation Costs, Ontario, 1984
15. Freestone Peaches for Fresh Market: Estimated Cost of Production, Ontario, 1984
16. Freestone Peaches for Fresh Market: Operation Costs, Ontario, 1984

Table No.

17. Bartlett Pears for Fresh Market: Estimated Cost of Production, Ontario, 1984
18. Bartlett Pears for Fresh Market: Operation Costs, Ontario, 1984
19. Bartlett Pears for Processing: Estimated Cost of Production, Ontario, 1984
20. Bartlett Pears for Processing: Operation Costs, Ontario, 1984
21. Strawberries for Commercial Harvest and Pick-Your-Own (Establishment): Estimated Cost of Production, 1984
22. Strawberries for Commercial Harvest and Pick-Your-Own (Renovation): Estimated Cost of Production, 1984
23. Strawberries for Commercial Harvest (Preharvest and Harvest): Estimated Cost of Production, 1984
24. Strawberries for Pick-Your-Own (Preharvest and Harvest): Estimated Cost of Production, 1984

Appendix
Table No.

1. Marketed Fruit Production, Ontario, 1979-1983
2. Average Prices Received for Fruit, Ontario, 1979-1983
3. Minimum Prices Paid for Ontario Tender Fruit For Processing, 1980-1984
4. Minimum Prices Paid for Ontario Grapes for Processing, 1980-1984

INTRODUCTION

Since 1948, the Economics and Policy Coordination Branch has carried out comprehensive studies of major field and horticultural crops grown in Ontario. These studies were designed to determine costs and returns of various farm enterprises as well as the physical amounts of production inputs required.

Traditionally, data was collected by means of farmer interviews. Published reports of these studies in the form of county, regional and provincial averages found a wide distribution among extension and research personnel, educational institutions, farm organizations, lending institutions and policy-makers. Cooperating farmers received reports showing their individual information in comparison with group averages.

With this extensive background in the development of cost studies, the Economics and Policy Coordination Branch has begun to use computers in the preparation of production cost data. Methods of computer simulation have now replaced the time consuming process of data collection, tabulation and analysis.

With this new approach, special attention is paid to the physical quantities and prices of inputs for each crop studied. The technology used in the production of various crops is carefully examined so that the computer models accurately reflect the appropriate production technology for each commodity.

Information on physical inputs is obtained from a number of sources including:

1. previous studies done by this branch.
2. surveys of the farm supply trade.
3. technical input/output coefficients.
4. the consensus of producers, research, extension and agribusiness personnel.

THE DEVELOPMENT OF THE ACRES PROGRAM

A large number of computer programs that generate budgets and crop production cost estimates are now in existence. These computer programs vary in their degree of sophistication and in the amount of detail prepared. A large number of estimates covering a wide range of conditions can be generated quickly and efficiently. The effect of varying levels of technology, management practices and price levels can also be analyzed.

Cost of production estimates used in this report are based on the ACRES program. ACRES (Agricultural CRop Enterprises System) is a FORTRAN program originally written in Montana, adapted by Alberta Agriculture and recently modified and rewritten by the Economics and Policy Coordination Branch to meet Ontario conditions. The 1984 cost of production estimates for peaches, pears, sweet cherries, and sour cherries are based on these computer models. The 1984 cost of production estimates for apples, grapes, and strawberries are updated versions of recent studies.

METHODS AND PROCEDURES USED IN PREPARING THE CROP PRODUCTION COST ESTIMATES

The information used in the preparation of each production cost estimate in this report was prepared through the use of recent Economics and Policy Coordination Branch studies, plus consultations with producers, extension, research and agribusiness personnel.

For each crop cost estimate in this report, the data was organized into variable and fixed costs and totalled to arrive at the cost of production both on a per acre and per hectare basis. Variable costs are those which vary directly with the production of each crop grown. They include seed, plants, hired labour, fertilizer, herbicides, insecticides, fungicides, other materials, machinery operating costs, marketing charges and interest on operating capital. Fixed cost inputs are operator labour, management allowance, interest on land, machinery, buildings, depreciation on machinery and buildings, taxes on real estate (net of farm tax rebate), and other overhead cost items.

In this report, cash costs of production are also determined. Cash costs include total variable costs, interest on the debt portion of investment in tractors and machines, taxes and other overhead costs.

For each crop, operational costs including labour, tractor and machine costs are shown on a per acre and per hectare basis. Where an operation was performed more than once, the total cost for labour, tractor and other equipment represent the total cost of the multiple operations.

LABOUR HOURS AND COSTS

The required number of labour hours was based on previous studies as well as through discussions with those familiar with the production of each study crop. For those crops which required labour for harvesting and marketing in proportion to yields obtained, labour hours and costs reflected the yield in the cost estimate.

The operator labour hours were valued at $6.50 per hour. In addition, an allowance to management was made at the rate of 5 percent of the gross income.

The hired labour cost was calculated on a per hour basis and included benefits such as workmen's compensation, unemployment insurance, and the Canada Pension Plan. The rates varied according to area, crop, and skill involved. For some crops, piece work rates were used which were suggested by local farm labour pools. An allowance of 15 percent of basic earnings was added to cover benefits.

MATERIALS

The amount of each material input was based on commonly used practices.

Input prices were based on averages charged by the trade in the area where the particular crop was grown.

For most crops, the quantities of seed, plants, fertilizer nutrients and other inputs are given on a per hectare basis.

Because of the multitude of products available, pesticides are grouped as herbicides, insecticides, fungicides, nematicides, etc.

The cost and quantity of non-returnable containers was reported where applicable.

TRACTORS, MACHINES AND TRUCKS

Machinery complements used in the various crop production cost estimates were assumed to be five years old.

Tractor and machine costs included depreciation, interest on investment, insurance, storage, repairs, maintenance, fuel and lubrication. If machines were used for other farming operations, costs were adjusted based on the proportion of use on the study crop.

The declining balance method of depreciation was used, and a 15 percent rate to powered and a 10 percent rate to non-powered machines was applied.

To calculate interest on machinery investment, it was assumed that the equity portion was 70 percent and the debt portion was 30 percent of the total depreciated value.

For this report, interest on equity was calculated at 7.75 percent which was the average interest rate paid by chartered banks on savings accounts. The interest on the debt portion was based on the average prime rate of 12 percent plus one for a total of 13 percent.

Insurance and storage costs for machinery were based on 1.5 percent of their purchase price.

Repair and maintenance costs for individual machines were based on the factsheet "Cost of Owning and Operating Farm Machines", Agdex 825, Ontario Ministry of Agriculture and Food.

Fuel costs were based on the size of each tractor, truck or self-propelled machine used in the production cost estimates. The following farmgate fuel prices were used:

Gasoline 36.5¢/litre Diesel 36.5¢/litre

The cost of oil, grease and filters was calculated at 15 percent of the fuel cost.

CUSTOM FARMWORK SERVICES

There are crops produced in Ontario where it is an accepted practice to use custom farmwork services to perform certain operations. Usually these services are employed when the farmer needs specialized machines such as harvesters, sprayers, fertilizer applicators and trucks. Most of these machines cannot be economically owned and operated by one producer. Custom costs were itemized on a per hectare or per acre basis.

LAND CHARGES

Determining the annual cost for land use is a controversial part in any study on production costs. During the past two decades, purchasers of farmland have been willing to pay more for it than can be justified from agricultural production. Purchasers believe the speculative aspect of land ownership offers benefits above those received from crop production. For this reason the appropriate interest rate used in calculating the interest cost on bare land for these crop production estimates was the real interest rate. The "real interest rate" is defined as the current lending rate of interest adjusted for inflation.

In this report, interest on land investment was calculated as follows:

1. The value of bare land was based on the average value for land in areas of Ontario where the production of each study crop predominates.

2. The interest rate applied was the current lending rate discounted for the rate of inflation which resulated in a 7.1 percent rate.

The farm real estate taxes used for each study crop reflect the area of production and are subject to Ontario's Farm Tax Reduction.

BUILDING COSTS

For those crops where buildings are used in grading, packing, and/or storage, a building cost allowance was made.

The initial cost of these structures was based on the assumption that buildings were five years old.

Depreciation:	steel and concrete structures	2.5%
	wood structures	5.0%
	greenhouses	2.0%

The interest on building investment was set at 7.1 percent which was also used in calculating interest on land investment.

Taxes on farm buildings were covered by real estate taxes.

Repairs and maintenance:	steel structures	1.0%
	concrete structures	0.25%
	wood structures	1.5%

Insurance: 0.5% of initial cost.

The cost of machine housing was covered under tractor and machine costs.

Allowances are made for the use of picking baskets, storage bins, and other pieces of reusable equipment required in the production of certain crops.

INTEREST ON OPERATING CAPITAL

Interest on operating capital required to finance each study crop was calculated from the time an expenditure was made until the time income was generated from sales. Operating capital includes the cost of materials, fuel, repairs, hired labour and other cash items. In this study, the interest rate applied to operating capital was the average prime rate plus 1 percent or (12% + 1%).

OTHER OVERHEAD

This allowance covers such items as the study crop's share of utilities, accounting and administration costs, use of the farm automobile, and general farm maintenance.

OTHER COST CONSIDERATIONS

Depending on the crop studied, there are certain additional cost factors such as crop insurance, marketing board fees, grading charges and selling commissions.

YIELD AND RETURNS

For each study crop presented in this report, a footnote to the table defines how the average yield and average price were calculated.

Additional information on average yields and prices is shown in the Appendix of this report.

GROSS MARGIN ANALYSIS

Gross margin is the amount above the variable costs that a crop contributes to the operator for his wages, management, and to the investment in machinery and land.

CASH ANALYSIS

The cash analysis section estimates the returns over cash costs.

Cash costs comprise all variable costs as well as interest on the debt portion of tractor and machine investment, real estate taxes and other overhead costs.

Table No. 1--Apples on Standard Trees: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: harvesting	1,324	536
other	259	104
Fertilizer	59	24
Pesticides	516	209
Mouse bait	11	4
Bee rental	10	4
Tractor operating costs	128	52
Machine operating costs	125	51
Bin usage	190	77
O.A.M.C. fees	57	23
Crop and liability insurance	92	37
Interest on operating capital (@ 13%/yr.for 3 months)	99	40
Miscellaneous costs	4	2
TOTAL VARIABLE COSTS	2,874	1,163
FIXED COSTS		
Operator labor (51.9 hr./ha)	337	137
Tractor use (dep.,int.,ins.,storage)	74	30
Machine use (dep.,int.,ins.,storage)	109	44
Interest on land (@ 7.1%)	203	82
Taxes	25	10
TOTAL FIXED COSTS	748	303
TOTAL COSTS a/	3,622	1,466
tonne b/	196	
bushel b/		3.72

a/ Costs are to the end of harvest and do not include marketing or storage charges.

b/ Yield for standard trees was 18.5 tonne/ha or 394 bu./ac.

Note: Costs are an update based on "Apple Production Costs for Standard and Size-Controlling Trees, Ontario, 1982".

Table No. 2--Apples on Size-Controlling Trees: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: harvesting	1,171	474
other	491	198
Fertilizer	93	38
Pesticides	620	251
Mouse bait	17	7
Bee rental	19	8
Tractor operating costs	127	51
Machine operating costs	103	42
Bin usage	292	118
O.A.M.C. fees	58	24
Crop and liability insurance	121	49
Interest on operating capital (@ 13%/yr. for 3 months)	111	45
Miscellaneous costs	3	1
TOTAL VARIABLE COSTS	3,226	1,306
FIXED COSTS		
Operator labor (49.4 hr./ha)	321	130
Tractor use (dep.,int.,ins.,storage).	95	38
Machine use (dep.,int.,ins.,storage).	124	50
Interest on land (@ 7.1%)	337	136
Taxes	24	10
TOTAL FIXED COSTS	901	364
TOTAL COSTS a/	4,127	1,670
tonne b/	189	
bushel b/		3.58

a/ Costs are to the end of harvest and do not include marketing or storage charges.

b/ Yield for size-controlling trees was 21.9 tonne/ha or 466 bu./ac.

Note: Costs are an update based on "Apple Production Costs for Standard and Size-Controlling Trees, Ontario, 1982".

Table No. 3--Sour Cherries for Processing, Hand-Harvested: Estimated Cost of Production, Ontario, 1984

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: picking (445 hr./ha)	1,735	702
grading (59.3 hr./ha)	267	108
other (37.1 hr./ha)	159	64
Fertilizer: Am. Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha)	63	26
Insecticides	142	58
Fungicides	250	101
Herbicides	46	18
Other sprays	82	33
Manure (22.4 tonne/ha)	247	100
Cover crop seed	12	5
Tractor and machine costs:		
-repairs and maintenance	204	82
-fuel	275	111
Building, repairs and electricity	32	13
Marketing Board fees	242	98
Interest on operating capital (13%/yr. for 4 months)	164	67
TOTAL VARIABLE COSTS	3,977	1,609
FIXED COSTS		
Operator labor (101 hr./ha)	659	266
Management allow. (5% of gross income)	349	141
Tractor and machine costs:		
-depreciation	311	126
-interest on investment	195	79
-insurance and storage	84	34
Building use	179	73
Interest on land ($22,240/ha @ 7.1%)	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,502	1,417
TOTAL COSTS	7,479	3,026
tonne	834	
ton		757
Assumed yield: 8.97 tonne/ha; 4 ton/acre		
Price a/: $779.17/tonne; $707.10/ton		
GROSS MARGIN ANALYSIS		
Gross income	6,989	2,828
Total variable costs	3,977	1,609
Gross margin	3,012	1,219
CASH ANALYSIS		
Gross income	6,989	2,828
Cash costs b/	4,205	1,701
Returns over cash costs	2,784	1,127

a/ The price is the 1984 payment for a quality rating of either 95 or 96 percent.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $82/ha ($33/ac.) plus taxes and other overhead costs.

Table No. 4--Sour Cherries for Processing, Hand-Harvested: Operation Costs, Ontario, 1984

	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha.	per ac.	per ha.	per acre
Pruning and brush removal	1	74.1	30.0	616.22	249.37
Fertilizing	1	2.47	1.0	30.22	12.23
Cultivation	6	7.41	3.0	119.72	48.45
Mowing	2	2.47	1.0	56.61	22.91
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	6	4.94	2.0	147.77	59.80
Spreading manure	1	4.94	2.0	111.25	45.02
Sow cover crop	1	1.24	.5	30.22	12.23
General maintenance .	a/	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	19.8	8.0	293.44	118.75
Picking	a/	445	180.0	1761.50	712.84
Sorting and grading .	a/	59.3	24.0	266.88	108.00
Marketing-delivery ..	a/	14.8	6.0	344.72	139.50

a/ Operation performed as required.

Table No. 5--Sweet Cherries for Fresh Market: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: harvesting (247 hr./ha).....	929	376
grading (124 hr./ha)	556	225
other (24.7 hr./ha)	104	42
Fertilizer: Am.Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha) ...	63	26
Insecticides	237	96
Fungicides	248	100
Herbicides	46	18
Manure (22.4 tonne/ha)	247	100
Cover crop seed	12	5
Containers	742	300
Tractor and machine costs:		
-repairs and maintenance	165	67
-fuel	235	95
Building, repairs and electricity	40	16
Interest on operating capital (13%/yr. for 4 months)	159	65
TOTAL VARIABLE COSTS	3,840	1,554
FIXED COSTS		
Operator labor (72.9 hr./ha)	474	192
Management allow. (5% of gross income) ..	345	139
Tractor and machine costs:		
-depreciation	280	113
-interest on investment	183	74
-insurance and storage	74	30
Building use	179	73
Interest on land ($22,240/ha @ 7.1%)	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,260	1,319
TOTAL COSTS	7,100	2,873
tonne	1,585	
ton		1,437
Assumed yield: 4.48 tonne/ha; 2 ton/acre		
Price a/: $1,540.54/tonne; $13.30 per 3x4 L master		
GROSS MARGIN ANALYSIS		
Gross income	6,902	2,793
Total variable costs	3,840	1,554
Gross margin	3,062	1,239
CASH ANALYSIS		
Gross income	6,902	2,793
Cash costs b/:	4,063	1,644
Returns over cash costs	2,839	1,149

a/ The 1984 price is an average of the previous three years for sweet cherries sold through the Central Fruit Exchange.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $77/ha ($31/ac.) plus taxes and other overhead costs.

Table No. 6 --Sweet Cherries for Fresh Market: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Pruning and brush removal	1	47.0	19.0	385.42	155.97
Fertilizing	1	1.24	.5	22.19	8.98
Cultivation	4	4.94	2.0	79.82	32.30
Mowing	3	3.71	1.5	84.91	34.36
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	8	9.88	4.0	295.54	119.60
Spreading manure	1	4.94	2.0	111.25	45.02
Sow cover crop	1	1.24	.5	22.19	8.98
General maintenance	a/	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	9.88	4.0	147.94	59.87
Picking	a/	247	100.0	955.92	386.84
Sorting and grading	a/	124	50.0	556.00	225.00
Marketing-delivery	a/	9.88	4.0	229.81	93.00

a/ Operation performed as required.

Table No. 7 --Sweet Cherries for Canning and Freezing Purposes: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: picking (222 hr./ha)	867	351
grading (124 hr./ha)	556	225
other (24.7 hr./ha)	104	42
Fertilizer: Am. Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha) ..	63	26
Insecticides	237	96
Fungicides	248	100
Herbicides	46	18
Manure (22.4 tonne/ha)	247	100
Cover crop seed	12	5
Tractor and machine costs:		
-repairs and maintenance	165	67
-fuel	235	95
Building, repairs and electricity	27	11
Marketing Board fees	54	22
Interest on operating capital (13%/yr. for 4 months)	128	52
TOTAL VARIABLE COSTS	3,046	1,233
FIXED COSTS		
Operator labor (72.9 hr./ha)	474	192
Management allow. (5% of gross income) .	272	110
Tractor and machine costs:		
-depreciation	280	113
-interest on investment	183	74
-insurance and storage	74	30
Building use	179	73
Interest on land ($22,240/ha @ 7.1%) ...	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,187	1,290
TOTAL COSTS	6,233	2,523
tonne	1,391	
ton		1,261
Assumed yield: 4.48 tonne/ha; 2 ton/acre		
Price a/: $1,215.12/tonne; $1,101.50/ton		
GROSS MARGIN ANALYSIS		
Gross income	5,444	2,203
Total variable costs	3,046	1,233
Gross margin	2,398	970
CASH ANALYSIS		
Gross income	5,444	2,203
Cash costs b/	3,269	1,323
Returns over cash costs	2,175	880

a/ The price is the 1984 payment for sweet cherries sold through the Ontario Tender Fruit Producers' Marketing Board.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $77/ha ($31/ac) plus taxes and other overhead costs.

Table No. 8 --Sweet Cherries for Canning and Freezing Purposes: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Pruning and brush removal	1	47.0	19.0	385.42	155.97
Fertilizing	1	1.24	.5	22.19	8.98
Cultivation	4	4.94	2.0	79.82	32.30
Mowing	3	3.71	1.5	84.91	34.36
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	8	9.88	4.0	295.54	119.60
Spreading manure	1	4.94	2.0	111.25	45.02
Sow cover crop	1	1.24	.5	22.19	8.98
General maintenance .	a/	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	9.88	4.0	147.94	59.87
Picking	a/	222	90.0	894.14	361.84
Sorting and grading .	a/	124	50.0	556.00	225.00
Marketing-delivery ..	a/	9.88	4.0	229.81	93.00

a/ Operation performed as required.

Table No. 9--Sweet Cherries for Maraschino Purposes: Estimated Cost of Production, Ontario, 1984

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: picking (247 hr./ha)	929	376
grading (124 hr./ha)	556	225
other (24.7 hr./ha)	104	42
Fertilizer: Am. Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha)	63	26
Insecticides	237	96
Fungicides	248	100
Herbicides	46	18
Manure (22.4 tonne/ha)	247	100
Cover crop seed	12	5
Tractor and machine costs:		
-repairs and maintenance	165	67
-fuel	235	95
Building, repairs and electricity	27	11
Marketing Board fees	54	22
Interest on operating capital (13%/yr. for 4 months)	129	52
TOTAL VARIABLE COSTS	3,109	1,258
FIXED COSTS		
Operator labor (72.9 hr./ha)	474	192
Management allow. (5% of gross income)	139	56
Tractor and machine costs:		
-depreciation	280	113
-interest on investment	183	74
-insurance and storage	74	30
Building use	179	73
Interest on land ($22,240/ha @ 7.1%)	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,054	1,236
TOTAL COSTS	6,163	2,494
tonne	1,376	
ton		1,247
Assumed yield: 4.48 tonne/ha; 2 ton/acre		
Price a/: $619.42/tonne; $561.50/ton		
GROSS MARGIN ANALYSIS		
Gross income	2,775	1,123
Total variable costs	3,109	1,258
Gross margin	-334	-135
CASH ANALYSIS		
Gross income	2,775	1,123
Cash costs b/	3,332	1,348
Returns over cash costs	-557	-225

a/ The price is the 1984 payment for sweet cherries sold through the Ontario Tender Fruit Producers' Marketing Board.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $77/ha ($31/ac) plus taxes and other overhead costs.

Table No.10 --Sweet Cherries for Maraschino Purposes: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Pruning and brush removal	1	47.0	19.0	385.42	155.97
Fertilizing	1	1.24	.5	22.19	8.98
Cultivation	4	4.94	2.0	79.82	32.30
Mowing	3	3.71	1.5	84.91	34.36
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	8	9.88	4.0	295.54	119.60
Spreading manure	1	4.94	2.0	111.25	45.02
Sow cover crop	1	1.24	.5	22.19	8.98
General maintenance .	a/	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	9.88	4.0	147.94	59.87
Picking	a/	247	100.0	955.92	386.84
Sorting and grading .	a/	124	50.0	556.00	225.00
Marketing-delivery ..	a/	9.88	4.0	229.81	93.00

a/ Operation performed as required.

Table No. 11--Concord Grapes for Processing: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor	666	269
Fertilizer including manure	67	27
Pesticides	275	112
Maintenance (twine, wire, posts, etc.)	87	35
Tractor operating costs	234	95
Machine operating costs	583	236
Marketing Board fees	55	22
Interest on operating capital (13%/yr. for 6 months)	124	50
TOTAL VARIABLE COSTS	2,091	846
FIXED COSTS		
Operator labor (64.2 hr./ha)	417	169
Management allow. (5% of gross income)	117	48
Tractor use (dep.,int.,ins.,storage)	132	53
Machine use (dep.,int.,ins.,storage)	596	241
Interest on land ($11,120/ha @ 7.1%)	790	320
Taxes	47	19
Other overhead costs	53	21
TOTAL FIXED COSTS	2,152	871
TOTAL COSTS	4,243	1,717
tonne	592	
ton		537
Yield: 7.17 tonne/ha; 3.2 ton/acre		
Price a/ : $326.50/tonne; $296.00/ton		
GROSS MARGIN ANALYSIS		
Gross income	2,340	947
Total variable costs	2,091	846
Gross margin	249	101
CASH ANALYSIS		
Gross income	2,340	947
Cash costs b/	2,191	886
Returns over cash costs	149	61

a/ The 1984 price is an average of the previous three years for grapes sold through the Ontario Grape Growers' Marketing Board.

b/ Cash costs include total variable costs plus taxes and other overhead costs.

Note: Costs are an update based on "The Economics of Concord and DeChaunac Grape Production in Ontario, 1980".

Table No. 12--DeChaunac Grapes for Processing: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor	732	296
Fertilizer incl. manure	91	37
Pesticides	327	133
Maintenance (twine, wire, posts, etc.)	70	28
Tractor operating costs	237	96
Machine operating costs	622	252
Marketing Board fees	68	27
Interest on operating capital (13%/yr. for 6 months)	135	55
TOTAL VARIABLE COSTS	2,282	924
FIXED COSTS		
Operator labor (69.2 hr./ha)	450	182
Management allow. (5% of gross income)	168	68
Tractor use(dep.,int.,ins.,storage)	122	50
Machine use(dep., int., ins., storage)	615	248
Interest on land ($11,120/ha @ 7.1%)	790	320
Taxes	47	19
Other overhead costs	55	22
TOTAL FIXED COSTS	2,247	909
TOTAL COSTS	4,529	1,833
tonne	518	
ton		470
Yield: 8.74 tonne/ha; 3.9 ton/ac.		
Price a/ : $384.80/tonne; $349.00/ton		
GROSS MARGIN ANALYSIS		
Gross income	3,363	1,361
Total variable costs	2,282	924
Gross margin	1,081	437
CASH ANALYSIS		
Gross income	3,363	1,361
Cash costs b/	2,384	965
Returns over cash costs	979	396

a/ The 1984 price is an average of the previous three years for grapes sold through the Ontario Grape Growers' Marketing Board.

b/ Cash costs include total variable costs plus taxes and other overhead costs.

Note: Costs are an update based on "The Economics of Concord and DeChaunac Grape Production in Ontario, 1980".

Table No. 13--Clingstone Peaches for Processing: Estimated Cost of Production, Ontario, 1984

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: harvesting (173 hr./ha) ...	605	245
grading (39.5 hr./ha)	178	72
other (163 hr./ha)	723	292
Fertilizer: Am. Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha) ..	63	26
Insecticides	323	131
Fungicides	457	185
Herbicides	46	18
Manure (11.2 tonne/ha)	124	50
Replacement trees (12/ha)	59	24
Tractor and machine costs:		
-repairs and maintenance	175	71
-fuel	269	109
Building, repairs and electricity	27	11
Marketing Board fees	111	45
Interest on operating capital (13%/yr. for 6 months)	134	54
TOTAL VARIABLE COSTS	3,351	1,356
FIXED COSTS		
Operator labor (93.9 hr./ha)	611	247
Management allow. (5% of gross income) .	257	104
Tractor and machine costs:		
-depreciation	309	125
-interest on investment	200	81
-insurance and storage	84	34
Building use	179	73
Interest on land ($22,240/ha @ 7.1%) ...	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,365	1,362
TOTAL COSTS	6,716	2,718
tonne	600	
ton		544
Assumed yield: 11.2 tonne/ha; 5 ton/acre		
Price a/: $418 per ton; $461.12 per tonne		
GROSS MARGIN ANALYSIS		
Gross income	5,164	2,090
Total variable costs	3,351	1,356
Gross margin	1,813	734
CASH ANALYSIS		
Gross income	5,164	2,090
Cash costs b/	3,581	1,449
Returns over cash costs	1,583	641

a/ The 1984 price is an average of the previous three years for clingstone peaches sold through the Ontario Tender Fruit Producers' Marketing Board.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $84/ha ($34/ac) plus taxes and other overhead costs.

Table No. 14-Clingstone Peaches for Processing: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Planting replacement trees	a/	2.47	1.0	16.06	6.50
Pruning and brush removal	1	98.9	40.0	634.50	256.77
Cultivation	4	4.94	2.0	79.82	32.30
Spreading manure	1	3.71	1.5	85.70	34.68
Fertilizing	1	1.24	.5	22.19	8.98
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	10	9.9	4.0	295.54	119.60
Hand thinning	1	89.0	36.0	400.32	162.00
Mowing	4	4.94	2.0	113.23	45.82
General maintenance	a/	7.41	3.0	83.23	33.68
Distribution and collection of containers	a/	24.7	10.0	366.19	148.19
Picking	a/	173.0	70.0	632.21	255.84
Grading	a/	39.5	16.0	177.92	72.00
Marketing-delivery	a/	7.41	3.0	172.36	69.75

a/ Operation performed as required.

Table No.15--Freestone Peaches for Fresh Market: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: harvesting (222 hr./ha) ...	778	315
grading (79.1 hr./ha)	356	144
other (163 hr./ha)	723	292
Fertilizer: Am.Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha) ..	63	26
Insecticides	323	131
Fungicides	457	185
Herbicides	46	18
Manure (11.2 tonne/ha)	124	50
Replacement trees (12/ha)	59	24
Containers	1,867	756
Tractor and machine costs:		
-repairs and maintenance	173	70
-fuel	311	126
Building, repairs and electricity	44	18
Interest on operating capital (13%/yr. for 6 months)	310	125
TOTAL VARIABLE COSTS	5,691	2,303
FIXED COSTS		
Operator labor (98.8 hr./ha)	643	260
Management allow. (5% of gross income) .	482	195
Tractor and machine costs:		
-depreciation	332	134
-interest on investment	213	86
-insurance and storage	89	36
Building use	179	73
Interest on land ($22,240/ha @ 7.1%) ...	1,579	639
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	3,663	1,482
TOTAL COSTS	9,354	3,785
tonne	835	
ton		757
Assumed yield: 11.2 tonne/ha; 5 ton/acre		
Price a/ : $7.80 per 3x4 L master		
$860.45 per tonne		
GROSS MARGIN ANALYSIS		
Gross income	9,637	3,900
Total variable costs	5,691	2,303
Gross margin	3,946	1,597
CASH ANALYSIS		
Gross income	9,637	3,900
Cash costs b/	5,925	2,398
Returns over cash costs	3,712	1,502

a/ The 1984 price is an average of the previous three years for peaches sold through the Central Fruit Exchange.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $88/ha ($36/ac.) plus taxes and other overhead costs.

Table No.16--Freestone Peaches for Fresh Market: Operation Costs, Ontario, 1984

	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha.	per ac.	per ha.	per acre
Planting replacement trees	a/	2.47	1.0	16.06	6.50
Pruning and brush removal	1	98.9	40.0	634.50	256.77
Cultivation	4	4.94	2.0	79.82	32.30
Spreading manure	1	3.71	1.5	85.70	34.68
Fertilizing	1	1.24	.5	22.19	8.98
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	10	9.9	4.0	295.54	119.60
Hand thinning	1	89.0	36.0	400.32	162.00
Mowing	4	4.94	2.0	113.23	45.82
General maintenance .	a/	2.47	3.0	83.23	33.68
Distribution and collection of containers	a/	24.7	10.0	366.19	148.19
Picking	a/	222	90.0	805.18	325.84
Grading and packing	a/	79.1	32.0	355.84	144.00
Marketing-delivery ..	a/	12.4	5.0	287.27	116.25

a/ Operation performed as required.

Table No. 17--Bartlett Pears for Fresh Market: Estimated Cost of Production, Ontario, 1984

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: harvesting (98.8 hr./ha) ..	328	133
grading (29.7 hr./ha)	133	54
other (39.5 hr./ha)	167	67
Fertilizer: Am. Nit. (222 kg/ha)	57	23
Mur. of Pot. (334 kg/ha) ..	63	26
Insecticides	375	152
Fungicides	39	15
Herbicides	46	18
Manure (11.2 tonne/ha)	124	50
Cover crop seed	12	5
Containers	1,272	515
Tractor and machine costs:		
-repairs and maintenance	153	62
-fuel	269	109
Buildings, repairs and electricity	52	21
Interest on operating capital (13%/yr. for 4 months)	133	54
TOTAL VARIABLE COSTS	3,223	1,304
FIXED COSTS		
Operator labor (90.2 hr./ha)	586	237
Management allow. (5% of gross income) .	289	117
Tractor and machine costs:		
-depreciation	257	104
-interest on investment	176	71
-insurance and storage	89	36
Building use	179	73
Interest on land ($11,120/ha @ 7.1%) ...	790	320
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	2,512	1,017
TOTAL COSTS	5,735	2,321
tonne	639	
ton		580
Assumed yield: 8.97 tonne/ha; 4 ton/acre		
Price a/: $6.50 per 3x4 L master		
$644.60 per tonne		
GROSS MARGIN ANALYSIS		
Gross income	5,782	2,340
Total variable costs	3,223	1,304
Gross margin	2,559	1,036
CASH ANALYSIS		
Gross income	5,782	2,340
Cash costs b/	3,442	1,393
Returns over cash costs	2,340	947

a/ The 1984 price is an average of the 1981-83 price for Bartlett pears sold through the Central Fruit Exchange.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $73/ha ($30/acre) plus taxes and other overhead costs.

Table No. 18--Bartlett Pears for Fresh Market: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Pruning and brush removal	1	76.6	31.0	623.63	252.37
Fertilizing	1	1.24	.5	22.19	8.98
Cultivation	4	4.94	2.0	79.82	32.30
Mowing	2	2.47	1.0	56.61	22.91
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	6	4.94	2.0	147.77	59.80
Manure spreading	1	3.71	1.5	85.70	34.68
Sow cover crop	1	1.24	.5	22.19	8.98
General maintenance .	a/	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	19.8	8.0	293.44	118.75
Picking	a/	98.9	40.0	354.95	143.64
Sorting and grading .	a/	29.7	12.0	133.44	54.00
Marketing-delivery	a/	9.9	4.0	229.81	93.00

a/ Operation performed as required.

Table No. 19--Bartlett Pears for Processing: Estimated Cost of Production, Ontario, 1984

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor: harvesting (98.8 hr./ha) ..	328	133
grading (29.7 hr./ha)	133	54
other (39.5 hr./ha)	167	67
Fertilizer: Am. Nit. (222 kg./ha)	57	23
Mur. of Pot. (334 kg/ha) ..	63	26
Insecticides	375	152
Fungicides	39	15
Herbicides	46	18
Manure (11.2 tonne/ha)	124	50
Cover crop seed	12	5
Tractor and machine costs:		
-repairs and maintenance	153	62
-fuel	269	109
Building, repairs and electricity	27	11
Marketing Board fees	109	44
Interest on operating capital (13%/yr. for 4 months)	82	33
TOTAL VARIABLE COSTS	1,984	802
FIXED COSTS		
Operator labor (90.2 hr./ha)	586	237
Management allow. (5% of gross income) .	153	62
Tractor and machine costs:		
-depreciation	257	104
-interest on investment	176	71
-insurance and storage	89	36
Building use	179	73
Interest on land ($11,120/ha @ 7.1%) ...	790	320
Taxes	47	19
Other overhead costs	99	40
TOTAL FIXED COSTS	2,376	962
TOTAL COSTS	4,360	1,764
tonne	486	
ton		441
Assumed yield: 8.97 t/ha; 4 ton/acre		
Price a/: $340.50 per tonne; $309 per ton		
GROSS MARGIN ANALYSIS		
Gross income.....	3,106	1,257
Total variable costs	1,984	802
Gross margin	1,122	455
CASH ANALYSIS		
Gross income	3,106	1,257
Cash costs b/	2,203	891
Returns over cash costs	903	366

a/ The 1984 price is an average of the previous three years based on a weighted average of 90% No.1 and 10% No.2 Bartlett pears.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $73/ha ($30/acre) plus taxes and other overhead costs.

Table No. 20--Bartlett Pears for Processing: Operation Costs, Ontario, 1984

	Times over	Labor hours per ha.	Labor hours per ac.	Labor, tractor and machine costs, $ per ha.	Labor, tractor and machine costs, $ per acre
Pruning and brush removal	1	76.6	31.0	623.63	252.37
Fertilizing	1	1.24	.5	22.19	8.98
Cultivation	4	4.94	2.0	79.82	32.30
Mowing	2	2.47	1.0	56.61	22.91
Weed spraying	1	2.47	1.0	44.23	17.90
Spraying	6	4.94	2.0	147.77	59.80
Manure spreading	1	3.71	1.5	85.70	34.68
Sow cover crop	1	1.24	.5	22.19	8.98
General maintenance	1	2.47	1.0	35.24	14.26
Distribution and collection of containers	a/	19.8	8.0	293.44	118.75
Picking	a/	98.9	40.0	354.95	143.64
Sorting and grading	a/	29.7	12.0	133.44	54.00
Marketing-delivery	a/	9.9	4.0	229.81	93.00

a/ Operation performed as required.

Table No.21--Strawberries for Commercial Harvest and Pick-Your-Own: Estimated Cost of Production, 1984

ESTABLISHMENT	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor (168 hr./ha)	672	272
Fertilizer: 34-0-0 (80 kg/ha)	20	8
10-20-20 (600 kg/ha)	155	63
plant starter (8 kg/ha)	17	7
Insecticides	24	10
Fungicides	32	13
Herbicides	147	59
Manure (45 tonne/ha)	360	146
Green manure seed	25	10
Plants (12,355/ha)	556	225
Fumigant	309	125
Straw (7.4 tonne/ha)	370	150
Tractor and machine costs:		
-repairs and maintenance	108	44
-fuel	144	58
Custom application, fumigant	25	10
Interest on operating capital (12.5%/yr. for 15 months)	463	187
TOTAL VARIABLE COSTS	3,427	1,387
FIXED COSTS		
Operator labor (49.4 hr./ha)	321	130
Tractor and machine costs:		
-depreciation	199	80
-interest on investment	288	117
-insurance and storage	42	17
Interest on land ($5,000/ha @ 6.5%/2 yr.)	650	263
Taxes (2 years)	70	28
Other overhead costs	247	100
TOTAL FIXED COSTS	1,817	735
TOTAL ESTABLISHMENT COSTS	5,244	2,122

Table No.22--Strawberries for Commercial Harvest and Pick-Your-Own: Estimated Cost of Production, 1984

RENOVATION	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor (66.7 hr./ha)	267	108
Fertilizer: 34-0-0 (100 kg/ha)	24	10
10-20-20 (500 kg/ha)	129	52
Herbicides	56	23
Straw (7.4 tonne/ha)	370	150
Tractor and machine costs:		
-repairs and maintenance	58	24
-fuel	94	38
Interest on operating capital (12.5%/yr. for 10 months)	104	42
TOTAL VARIABLE COSTS	1,102	447
FIXED COSTS		
Operator labor (12.4 hr./ha)	80	32
Tractor and machine costs:		
-depreciation	71	29
-interest on investment	100	40
-insurance and storage	17	7
TOTAL FIXED COSTS	268	108
TOTAL RENOVATION COSTS	1,370	555

Table No. 23--Strawberries for Commercial Harvest:
Estimated Cost of Production, 1984

PREHARVEST AND HARVEST	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: preharvest (29.6 hr./ha) ..	118	48
harvest (1,100 hr./ha)	3,300	1,335
Insecticides	131	53
Fungicides	223	90
Containers (14,827 qt./ha)	2,076	840
Tractor and machine costs:		
-repairs and maintenance.....	89	36
-fuel	143	58
Interest on operating capital (12.5%/yr. for 3 months)	22	9
TOTAL VARIABLE COSTS	6,102	2,469
FIXED COSTS		
Operator labor: preharvest (14.8 hr./ha).	96	39
harvest (44.5 hr./ha) ...	289	117
Management allow. (5% of gross income) ...	704	285
Tractor and machine costs:		
-depreciation	138	56
-interest on investment	193	78
-insurance and storage	34	14
Interest on land ($5,000/ha @ 6.5%)	325	131
Taxes	35	14
Other overhead costs	296	120
TOTAL FIXED COSTS	2,110	854
TOTAL PREHARVEST AND HARVEST COSTS ..	8,212	3,323
Assumed yield: 8,407 kg/ha; 6,000 qt./acre		
Assumed price: $1.68/kg; 95¢/qt.		
GROSS MARGIN ANALYSIS		
Gross income	14,085	5,700
Total variable costs:		
Establishment (¼ of cost) a/	857	347
Preharvest and harvest	6,102	2,469
Renovation (3/4 of cost) a/	826	335
Total	7,785	3,151
Gross margin	6,300	2,549
CASH ANALYSIS		
Gross income	14,085	5,700
Cash costs: b/		
Establishment (¼ of cost) a/	958	388
Preharvest and harvest	6,491	2,626
Renovation (3/4 of cost) a/	849	344
Total	8,298	3,358
Returns over cash costs	5,787	2,342

a/ The costs shown in this table are based on a system in which there are four harvesting years following the establishment year. Hence, establishment costs are spread over four production years. On the average, a field will be renovated three times during the four-year cycle before the field is taken out of production.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $174/ha ($70/ac.) plus taxes and other overhead costs.

Table No.24--Strawberries for Pick-Your-Own: Estimated Cost of Production, 1984

PREHARVEST AND HARVEST	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor: preharvest (29.6 hr./ha) ..	118	48
harvest (178 hr./ha)	712	288
Insecticides	131	53
Fungicides	223	90
Tractor and machine costs:		
-repairs and maintenance	89	36
-fuel	143	58
Interest on operating capital (12.5%/yr. for 3 months)	22	9
TOTAL VARIABLE COSTS	1,438	582
FIXED COSTS		
Operator labor: preharvest (14.8 hr./ha)	96	39
: harvest (44.5 hr./ha) ..	289	117
Management allow. (5% of gross income) .	481	195
Tractor and machine costs:		
-depreciation	138	56
-interest on investment	193	78
-insurance and storage	34	14
Interest on land ($5,000/ha @ 6.5%)	325	131
Taxes	35	14
Advertising	346	140
Other overhead costs	296	120
TOTAL FIXED COSTS	2,233	904
TOTAL PREHARVEST AND HARVEST COSTS.	3,671	1,486
Assumed yield: 8,407 kg/ha; 6,000 qt./acre		
Assumed price: $1.15/kg; 65¢/qt.		
GROSS MARGIN ANALYSIS		
Gross income	9,637	3,900
Total variable costs:		
Establishment (¼ of cost) a/	857	347
Preharvest and harvest	1,438	582
Renovation (3/4 of cost) a/	826	335
Total	3,121	1,264
Gross margin	6,516	2,636
CASH ANALYSIS		
Gross income	9,637	3,900
Cash costs: b/		
Establishment (¼ of cost) a/	958	388
Preharvest and harvest	2,173	879
Renovation (3/4 of cost) a/	849	344
Total	3,980	1,611
Returns over cash costs	5,657	2,289

a/ The costs shown in this table are based on a system in which there are four harvesting years following the establishment year. Hence, establishment costs are spread over four production years. On the average, a field will be renovated three times during the four-year cycle before the field is taken out of production.

b/ Cash costs include total variable costs plus interest on the debt portion of investment in tractors and machines of $174/ha ($70/ac.) plus taxes, other overhead costs, and advertising.

APPENDIX TABLE 1.--MARKETED FRUIT PRODUCTION, ONTARIO, 1979-1983

Crop	Unit	1979	1980	1981	1982	1983
			- '000 -			
Apples	lb	309,602	377,729	254,799	350,613	364,185
Cantaloupes	lb	1,620	933	1,078	1,068	1,245
Cherries, sour ..	lb	17,109	19,920	5,153	14,290	12,642
Cherries, sweet .	lb	4,150	5,651	1,570	3,030	4,040
Grapes	lb	140,714	137,440	137,648	129,519	156,634
Peaches	lb	53,590	64,712	35,236	51,841	59,744
Pears, Bartlett .	lb	22,987	25,031	14,972	17,972	18,712
Pears, Bosc	lb	n/a	6,184	4,928	4,182	5,970
Pears, Kieffer ..	lb	5,292	5,493	4,400	1,588	68
Pears, other	lb	7,882	5,049	4,060	2,833	3,629
Plums & prunes ..	lb	8,562	9,387	4,428	8,571	5,927
Raspberries	qt	681	825	716	934	856
Strawberries	qt	17,485	18,740	18,449	16,640	14,072

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economics Branch, Ontario Ministry of Agriculture and Food.

MARKETED FRUIT PRODUCTION, ONTARIO, 1979-1983

Crop	1979	1980	1981	1982	1983
		- tonnes -			
Apples	140,435	171,338	115,577	159,035	165,192
Cantaloupes	735	423	489	484	565
Cherries, sour	7,761	9,036	2,337	6,482	5,734
Cherries, sweet	1,882	2,563	712	1,374	1,833
Grapes	63,828	62,343	62,436	58,749	71,048
Peaches	24,308	29,353	15,983	23,515	27,099
Pears, Bartlett	10,427	11,354	6,791	8,152	8,488
Pears, Bosc	n/a	2,805	2,235	1,897	2,708
Pears, Kieffer	2,400	2,492	1,996	720	31
Pears, other	3,669	2,290	1,842	1,285	1,646
Plums & prunes	3,884	4,258	2,009	3,888	2,688
Raspberries	386	468	406	530	485
Strawberries	9,914	10,626	10,461	9,435	7,979

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economics Branch, Ontario Ministry of Agriculture and Food.

APPENDIX TABLE 2.--AVERAGE PRICES RECEIVED FOR FRUIT, ONTARIO, 1979-1983

		1979	1980	1981	1982	1983
				- cents/lb -		
Apples	-fresh	15.3	10.3	22.3	13.9	n.a.
	-proc.	6.9	5.6	9.2	6.6	n.a.
Cantaloupes	-fresh	14.3	16.2	26.7	27.5	27.3
Cherries, sour	-fresh	49.4	22.7	55.7	23.8	58.6
	-proc.	47.5	25.1	58.1	23.3	50.7
Cherries, sweet	-fresh	39.4	39.9	53.4	55.1	39.6
	-proc.	30.0	26.4	28.7	25.3	30.4
Grapes	-fresh	19.1	19.0	20.6	22.0	23.4
	-proc.	13.1	15.1	16.7	18.6	20.6
Peaches	-fresh	22.1	20.7	29.3	31.9	24.0
	-proc.	15.4	16.6	19.7	21.2	21.3
Pears	-fresh	18.7	18.1	21.2	20.4	20.0
	-proc.	11.8	12.7	14.2	15.5	14.0
Plums & prunes	-fresh	23.8	26.4	26.1	33.1	25.0
	-proc.	13.3	13.9	15.2	16.2	15.9
Raspberries	-fresh	104.0	113.6	181.7	187.7	218.0
Strawberries	-fresh	41.3	45.4	54.1	64.7	67.3
				-cents/kg -		
Apples	-fresh	33.7	22.7	49.2	30.6	n.a.
	-proc.	15.2	12.3	20.3	14.6	n.a.
Cantaloupes	-fresh	31.5	35.7	58.9	60.6	60.2
Cherries, sour	-fresh	108.9	50.0	122.8	52.5	129.2
	-proc.	104.7	55.3	128.1	51.4	111.8
Cherries, sweet	-fresh	86.9	88.0	117.7	121.5	87.3
	-proc.	66.1	58.2	63.3	55.8	67.0
Grapes	-fresh	42.1	41.9	45.4	48.5	51.6
	-proc.	28.9	33.3	36.8	41.0	45.4
Peaches	-fresh	48.7	45.6	64.6	70.3	52.9
	-proc.	34.0	36.6	43.4	46.7	47.0
Pears	-fresh	41.2	39.9	46.7	45.0	44.1
	-proc.	26.0	28.0	31.3	34.2	30.9
Plums & prunes	-fresh	52.5	58.2	57.5	73.0	55.1
	-proc.	29.3	30.6	33.5	35.7	35.1
Raspberries	-fresh	229.3	250.4	400.6	413.8	480.6
Strawberries	-fresh	91.0	100.1	119.3	142.6	148.4

Source: Seasonal Fruit and Vegetable Report, Economics Branch, Ontario Ministry of Agriculture and Food.

APPENDIX TABLE 3.--MINIMUM PRICES PAID FOR ONTARIO, TENDER FRUIT FOR PROCESSING, 1980-1984

	1980	1981	1982	1983	1984
			- $/ton -		
Sweet cherries					
-canning	760.50	900.50	1000.50	1001.50	1001.50
-maraschino	480.50	520.50	400.50	521.50	561.50
Sour cherries					
-97 to 100 grade ..	551.00	1208.00	520.80	1053.65	726.90
-74 & below grade .	406.00	889.00	384.50	775.25	535.50
Plums	240.50	260.50	276.50	277.50	291.50
Prunes	280.50	300.50	318.50	319.50	335.50
Damsons	300.50	320.50	340.50	341.50	358.50
Bartlett pears					
-No. 1	301.00	336.00	336.00	291.50	326.50
-No. 2	192.00	211.00	211.00	181.50	204.50
Kieffer pears					
-No. 1	155.00	185.00	185.00	185.50	185.50
-No. 2	91.00	101.00	101.00	101.50	101.50
Other pears					
-No. 1	254.00	276.00	276.00	251.50	290.50
Peaches					
-freestone	291.00	351.00	373.00	373.50	392.50
-clingstone	343.00	401.00	426.00	426.50	447.50

Source: Ontario Tender Fruit Producers' Marketing Board, Annual Report.

APPENDIX TABLE 4.--MINIMUM PRICES PAID FOR ONTARIO GRAPES FOR PROCESSING, 1980-1984

	1980	1981	1982	1983	1984
			- $/ton -		
Class 1. (Concord, Fredonia, Beta, Clinton, Lincoln, Lomanto, Patricia, President, VanBuren, & Westfield)	252	280	303	306	295
Class 2. (Elvira, Buffalo, Missouri Riesling, Ontario, Seneca, V35122, & V35123)	252	291	317	339	316
Class 3. (Niagara)	233	259	282	287	275
Class 3A. (Agawam, Brighton, Vergennes, Diana, Caco)	250	277	292	298	285
Class 4. (Veeport)	297	330	348	362	348
Class 4A. (Catawba & Ventura)	289	334	364	385	361
Class 5. (Blue French Hybrids, Rosette, Chancellor, Cascade, Baco Noir, Villard Noir, & Chambourcin)	363	400	430	446	428
Class 5A. (deChaunac)	306	337	348	361	347
Class 5B. (Chelois)	363	410	439	458	435
Class 6. (Delaware, Dutchess, N.Y. Muscat, Canada Muscat, Alden, Veeblanc, Vincent)	477	555	606	636	600
Class 6A. (Marechal Foch & Leon Millot)	392	420	433	448	430
Class 7. (White French Hybrids, Seibel 8229, 10868, 13047, Aurore, Verdelet, Seyve-Villard 172 & 23512, Seyval Blanc, Siegfried Rebe, & Vidal 256)	484	570	622	653	615
Class 8. (LeCommandent)	400	440	453	459	439
Class 8A. (Couderc 29935, Colobel, Florental, & B.S.2846)	495	554	605	638	598
Class 9. (J. Riesling)	672	850	910	868	800
Class 9A. (Chardonnay, Gamay, Aligote)	672	850	910	933	870
Class 9B. (all other Vinifera)	672	850	910	1000	925
Class 10. (experimental varieties)	422	482	538	559	549

Source: Ontario Grape Growers' Marketing Board, Annual Report.